Does Corporate Social Responsibility influence Corporate Financial Performance?

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I hereby declare that the work submitted is mine and that where I have made use of another's work, I have attributed the source(s) according to the Regulations set in the Student's Handbook.

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Abstract

The following study investigates the relationship between Corporate Social Responsibility (CSR) and Corporate Financial Performance (CFP). Especially, it is examined the effect that CSR may apply on firms' Return on Assets (ROA), Return on Equity (ROE) and Tobin's Q, three ratios depicting the management efficiency.

Firstly, some literature review regarding the different definitions of the CSR that are given from various researchers, the measurements issues and the results from previous researches examining the relationship of CSR with CFP, are going to be presented.

Later, the influence of the CSR on ROA, ROE and Tobin's Q ratios will be examined in a decent sample of American companies, for a 5-year period, from 2011 to 2015. Specifically, the sample includes only controversial firms, meaning those that are engaged with alcohol, tobacco, gambling, military and nuclear products, as are defined in Kinder, Lydenberg, and Domini's (KLD's) Stats database. Controversial companies have been observed that they do actively participate in CSR practices on an extent degree. Therefore, it will be very interesting to examine if such companies, by adopting CSR practices, are able to enhance their financial performance. Through this research will be discovered if firms are paid off for the implementation of social responsibility practices and if finally, the benefits outweigh the costs related with the CSR. The innovation of this study could be considered the fact that is focused on very recently data and it is examined a period, where the majority of companies have recovered from the global financial crisis.

All in all, the results of the current study indicate that there is a negative relationship between the two variables. The empirical research proved that CSR apply a significant inverse influence on the CFP. This implies that sin companies are engaged in further expenses related with the social performance, which not only are not being anticipated but in fact they manage to decrease the companies' profitability.

Keywords: *Corporate Social Responsibility, Corporate Financial Performance*

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Contents

Introduction

Corporate social responsibility (CSR) is a matter that dominates the literature for at least the last two decades and it is a concept adopted by a large range of businesses all over the world.

Many companies, by contributing to the technological development, have been criticized for harming the environment and the community with their corporate activities. This fact has obliged companies to direct their attention to the adoption of CSR practices, in order to protect their business profile, contribute to the overall good and therefore enhance company's value.

The first to deal with the CSR issue was Howard Bowen (1953), who established a book analyzing the fact that the social responsibility should concern any businessman.

Companies now are investing large amounts on their social performance, contributing to the environment protection, customer loyalty, better employee relations and care for minorities. Larger firms are observed that show greater interest and offer higher amounts in engaging with CSR with regard to smaller firms, probably due to the resources availability and the greater attention they attract.

CSR is obtaining more and more place in modern corporate construct and is becoming one of the top priorities of the managers. Growing global awareness regarding the environmental disaster, the climate change and the protection of the vulnerable social groups has directed stakeholders' attention to social, environmental and community issues.

The emergence of CSR may also be related with the need of accountable and transparent financial reports after the several financial crises that the history of economy has suffered.

However, Akerlof (2007) supported that CSR has not received the appropriate attention from the corporate managers. The obligatory implementation of CSR was stipulated by including the CSR law in the New Company Act-2013, defining that firms have to invest 2% of their net profit in social activities. Since then a great number of companies have included CSR in their policies, expecting to enhance both their social and financial performance.

Subsequently, companies are not being assessed only for the success of the traditional goals but also for their social strengths. Based on the stakeholder theory, companies should not be solely evaluated by their profits, but some attention should be placed on the social responsibility. Companies are multidimensional entities concentrating both economic - technical aspects and moral - social aspects. For this reason, more and

more managers are introducing social activities in businesses, trying to enhance their public image and increase the company's value. Corporate social activities may affect the customers perception, result to products of higher quality or enhance the relations of the board with the employees.

On the contrary, Friedman (1970) introduced some controversy with his views regarding the CSR issue. He supported that businesses should only focus on how to achieve higher profits. Corporate managers should not be interested in dealing with the social concerns. The only obligation and concern of corporate managers should be the success of profitability.

Based on these controversial opinions, much debate and conversation has been provoked regarding the importance that companies should attach to the implementation of corporate social policies. Also, a large number of researches have been conducted investigating the matter of what impact corporate social responsibility may have generally on the corporate financial performance.

Research Question

Consequently, taking into consideration the above, CSR may contribute to the overall community good, but the question of a financial manager would be if the company has any financial benefits from engaging in social activities. Does CSR influence the CFP? Are the costs, that it suffers from the implementation of the CSR concept, anticipated by higher profits? Does CSR lead to higher profitability?

This study will try to answer these questions. Especially, the study will be focused on investigating the CSR influence on the ROA, ROE and Tobin's Q ratios of the chosen companies, while controlling for a series of significant variables related with both CSR and CFP. The research sample is consisted of 87 controversial companies, traded only on the American stock exchange market and the data will be examined for a five-year period, from 2011 to 2015.

Chapter 1

In the first chapter are going to be presented some preliminary elements regarding the CSR. Especially, we will discuss the stakeholder theory, we will include a short historic review of CSR emergence and the various definitions that are attributed on it. Also, the measurement issues of CSR that researchers have faced will be introduced.

1.1 Stakeholder Theory

Stakeholder theory is closely related with the concepts of CSR and CFP. It supports that in the business world participate some members, called stakeholders, and each of them have an interest in the firm's operation and decision-making.

Freeman (1984) was the first to introduce the stakeholder theory, which supported that CSR applies a significant influence on CFP.

Van Beurden & Gossling (2008) supported that a company can be operational and profitable, if it is able to successfully deal its relations not only with the shareholders, but all the stakeholder members.

Carroll (1991) stated that there are five major stakeholder sub-categories, including shareholders, employees, customers, local community and society at large. Also, Carroll (1979, 1991) compared CSR with a pyramid, consisted of four responsibilities: economic, legal, ethical and philanthropic. She went even further by categorizing corporate management into moral, immoral and amoral. Moral managers are from their nature adherent to ethical norms and they aim to success profits only by behaving socially responsibly. Immoral managers act in a completely opposite way from the morals, without considering the ethical norms or what is right or not. Amoral managers are those who are not interested or ignore the ethical considerations, without having a purpose or economic incentives.

Based on these three forms of management, three corresponding explanations can be revealed regarding the relation between CSR and its impact on controversial companies' firm value. Firstly, immoral managers in controversial sectors usually employ CSR in an effort to enhance their own reputation, by behaving as socially responsible individuals. In other words, they do not intend to implement CSR practices as a long-term strategy, in order to improve the firm social image. This explanation can be called as the window-dressing hypothesis and it can lead to a negative association between CSR and firm value, as these managers do not substantially deal with the corporate social concerns.

On the other hand, moral managers adopt CSR in their corporate strategies, so they can contribute to the company's accountability, transparency and philanthropy. These

managers assume CSR practices as a core business strategy, resulting to the firm's value enhancement. This explanation is called value-enhancement hypothesis and it is able to result to a positive relationship between the two variables.

The last alternative of amoral managers is translated into following the current trend of CSR, without being really interested in ethical issues or in enhancing their own reputation or firm's value. This explanation is called value-irrelevant hypothesis, as CSR is assumed as a neutral strategy, neither beneficial nor harmful.

All in all, stakeholder theory shifted the companies' attention from the shareholders to key corporate groups, such as the customers, the employees or the suppliers. Companies by showing interest to all the stakeholders, not only to the shareholders, substantially participate in CSR aspects. Firms should try to improve and maintain good relationships with the stakeholders, in order to succeed in CSR practices. Therefore, assuming stakeholder theory as a core corporate strategy may result to some benefits for the company, either operational or financial.

1.2 Corporate Social Responsibility overview

Howard Bowen (1953), as was referred previously and also Heald (1957) placed the basic idea around the CSR. Bowen published a book referred on the social responsibilities of a businessman and Heald made an effort to define CSR, declaring that CSR is an obligation of firms, which should conform to, not only in order to enhance their financial performance, but also to contribute to the community.

Bowen in his effort to define CSR stated that: "it refers to the obligations of a businessman to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of the objectives and values of our society".

Howard Bowen and Keith Davis are thought to be the two most significant writers on the concept of CSR (Caroll, 1999).

In the 1960's, Keith Davis dominated with his presence, trying to give his view regarding the CSR.

In the 1970's CSR accumulated much interest and especially due to Harold Johnson's book. He stated that a company, which operates in a sociably responsible way is able to increase its profit in the long-run.

However, Milton Friedman (1970) supported that the only responsibility of a company is to enhance its profitability, with decent means.

The 1980's can be characterized by significant research on CSR and the introduction of some new concepts such as the stakeholder theory and the corporate financial performance.

Cochran and Wood (1984) were the first to examine the relationship between CSR and corporate profitability.

From the 1990s and till now many studies are concluded trying to define CSR, investigating the measurement issues or the relation of CSR with CFP.

The perception of corporate social responsibility is translated as the moral responsibility companies are obliged to present to all the potential members – stakeholders, who may be affected from the firm's activities. As stakeholders may be assumed the shareholders, the employees, the customers, the suppliers, the government and the local authority. Managers who actively follow the CSR practices and show real interest for it may result to the environmental protection, high quality products, good employee relations, higher productivity, protection of the vulnerable groups and corporate charity. Also, through CSR is secured accountability and transparency, key issues for the firms' operation.

Bowen (1953) declared that an actively interested company on social issues can secure benefits not only for its stakeholders, but also for the whole community.

Becker (1957) and Akerlof (1980) supported that firms will conform to social norms even this is translated to significant costs.

On the other hand, Ackerman and Bauer (1976) argued that CSR is a privilege of the profitable companies, as it is related with significant costs and characterized it as a by-product of profitability.

Smith (2003) supported that CSR is originated from the awareness that companies have to pay to the society.

Palazzo and Richter (2005) declared that CSR practices can be distinguished to transactional and transformational. The first one reveals a company that obeys to the social and moral norms, while the second one reveals a corporation that attempts to adhere to CSR.

Lindgreen et al. (2009a, b), Harjoto and Jo (2011), Jo and Harjoto (2011a, b), and Cai et al. (2011) declared that CSR is a practice through which companies contribute to the environment, to the people and the community above and beyond from what is usually required from them.

Engaging in CSR may also result to a competitive advantage. Hao et al. (2017) stated that a company will increase its CSR, if the competitor firms do so. Firms consider the competitors' adoption of CSR as a threat for their operating performance and try to anticipate this situation by investing more on CSR practices.

Last but not least, it is important to mention that companies by implementing CSR

practices face lower risk based on previous research (El Ghoul et al., 2011; Cheng et al., 2012; Albuquerque et al., 2014).

1.3 Measurement issues of CSR

Corporate social responsibility is a multidimensional term and it is consisted of a large range of behaviors and processes. Environment, governance and community are the basic aspects of CSR.

Each of them can be distinguished in many further parts. For example, friendly environmental strategies, investment in pollution control system, nature of the products, treatment of women and minorities, relationship with customers and generally with the community and philanthropic programs are some of these aspects.

The term of "multidimensionality" is one main reason why researchers are not able to reliably measure CSR.

CRS is such a complex construct, that the measurement of one or two areas of it may probably lead to insufficient information about the corporate social performance and therefore lead to biased results.

There have been emerged many rating indexes and databases, trying to evaluate specific social activities that companies have engaged in. These evaluations are being applied into a ranking system and each company acquires a rating in accordance to their corporate social performance.

The majority of researchers have applied different and objective criteria when they form a measurement for the corporate social performance. Content analysis, Fortune reputational social responsibility index, behavioral and perceptual measures, case studies, surveys (Aupperle, 1985), the Moskowitz reputation index (Cochran and Wood, 1984) and the KLD index rating (Waddock and Graves, 1997) are some of the CSR measurement means employed in previous researches.

For example, the Fortune index is supported to be an overall corporate management measure rather than a CSR rating. Content analysis can really produce valuable data for the corporate behavior, but it depends on a large scale from the purpose and the objectivity degree of the documents analyzed.

Generally, the majority of these measures are not quite reliable, as it is not straightforward what exactly they measure and they usually focus on few social aspects. There is not an overall and objective social responsibility measure, on which researchers may be based on.

Other researchers have studied the annual reports, that companies disclose every year, but they still do not provide an objective measurement.

Nowadays, Dow Jones Sustainability Index (DJSI), FTSE4Good, Business Ethics 100, Global Reporting Initiative (GRI) and KLD database are some of the most reliable CSR databases and the most applicable from companies all around the world.

Chapter 2

In the second charter, previous researches on the relationship of Corporate Social Responsibility with Corporate Financial Performance and the endogeneity issue between them will be elaborated. Also, previous studies employing similar sample companies, as in our research, are going to be presented.

2.1 Corporate Social Responsibility & Corporate Financial Performance – Literature review

Many researches have been conducted, investigating the relationship between the CSR and the CFP. Margolis and Walsh (2002) stated that one hundred twenty-two studies, examining the relationship of these two variables, have been established between 1971 and 2001 and many others till today.

However, a clear statement has not been established. There are studies that support a positive relationship, others find a negative relationship and others conclude to the absence of any significant relationship.

The cause of this continuing uncertainty may be the obstacle of a reliable CSR measurement. The majority of existent researches include one-dimensional measurement of CSR, which is usually applied in small samples, rendering the researchers result not highly reliable.

These different results may also be due to the fact of employing different samples and mainly for short periods or the omission of significant control variables may have led to these inconclusive results.

Furthermore, researchers have highlighted that the reverse causality between CSR and CFP and the endogeneity issues have to be further investigated.

However, the majority of previous researches suggest a mild positive relationship between CSR and CFP.

In this part researches supporting all the three alternatives regarding the relationship that might exist between CSR and CFP are going to be presented.

2.1.1 Negative Relationship

Proponents of the negative relationship support firms that follow friendly social policies suffer a competitive disadvantage (Aupperle et al., 1985). An active corporate social performance burdens the companies with further costs which should be normally assumed by others, such as the government or the individuals. For instance, there are firms that invest funds in order to control their environment pollution or participate in charity programs, while there are others that do not.

Based on Friedman (1970) and other neoclassical economists, firms that engage with the CSR practices incur costs, which outreach the benefits of a socially responsible behavior. As a result, these costs reduce the profitability and the company's value, leading the researchers to the perception of a negative relationship between CSR and CFP.

Preston et al (1997) declared that companies should invest less in CSR, in order to improve their short-term profits.

Wright and Ferris (1997) studied the relation of abnormal returns with CSR for a short period and found them to be negatively correlated.

Moore (2001) examined the influence of financial performance on CSR, assuming as sample only the supermarket-industry in the UK and he found that between these two variables exist an inverse relationship.

Waddock et al (2002) initiated his thoughts from the aspect that CSR is related with extrinsic costs, resulting to a competitive disadvantage. This in turn can be translated as less corporate wealth and profitability.

Lopez et al. (2007) supported also that CSR has an inverse impact on CFP. They employed Dow Jones Sustainability Index for the measurement of CSR and they concluded that social responsibility practices imply significant costs and lower profitability.

Bellevance (2009) studied the impact of CSR on ROE, ROA and market returns of 179 public Canadian firms for a 2-year period. He concluded that CSR negatively influenced the CFP, suggesting the establishment of the trade-off hypothesis. A company can either adopt CSR and suffer a profit decrease, or turn down CSR and success more in CFP.

Finally, Fu et al (2012) investigated how CSR influence CFP, employing the Tobin's Q ratio as the financial measurement, on a sample of publicly held Chinese companies. The results of the research proved them to be negatively related.

2.1.2 Neutral Relationship

The other alternative of a neutral relationship it is based on the fact that there is a large variety of variables, internal and external factors between CSR and CFP, which may intervene and distort this relationship, leading to insignificant results. Also, many researchers imply that the absence of a reliable measurement may conceal any potential relation.

Alexander and Buchholz (1978) examined the relationship of the two variables, by employing stock market performance, as the measure of the financial performance

and they found them to be insignificantly related.

Cochran and Wood (1984) used in their study the Moskowitz's reputation index, as a measure of CSR and they applied a new methodology by including control groups for specific industries. They examined both the influence of CSR on CFP and the influence of CFP on CSR. They found a significant relation between the average age of corporate assets and the social responsibility, but no any significant relation between the two main variables, pointing out that the direction of the causality has to be further investigated.

Ullman (1985) stated that there in a neutral relation between CSR and CFP, as there are many intermediate variables affecting this relation.

Aupperle, Carroll and Hatfield conducted also a research on 1985 investigating the relationship between corporate social responsibility and profitability. They constructed a research instrument to identify corporate social responsibility, based on four components (economic, legal, ethical, and discretionary concerns) and they employed the Return on Asset (ROE) ratio to measure profitability. They used the survey method to measure CSR and they expected a negative relation, as they supported that CSR practices may decrease the corporate resources. However, they finally found that between the two variables there is no significant relationship and the profitability of the socially responsible companies does not suffered any substantial change. Also, they highlighted the importance of establishing a reliable CSR measurement.

McWilliams, A. and Siegel, D. (2000) added to their research as a control variable the investment in Research and Development, as they supported that R&D expenses are a significant factor of the financial performance. By including the investments in R&D, they found a neutral relation between CSR and CFP. They employ Dow Jones Sustainability Index as the CSR measurement and they conclude that CSR practices imply some extra costs, leading to lower profitability.

2.1.3 Positive Relationship

The majority of the studies have proved that the existence of a positive relation between CSR and CFP is more common against the other two alternative results.

Proponents of the positive relationship support that there are very few costs with regard to the potential benefits, when a company functions by applying an actively social behavior. For example, a company that is interested about its relation with the employees, may not assume any significant cost, but this may contribute to the productivity increase and enhance the moral feeling of the employees. Companies that are reported as "the best firms to work for", regarding their treatment to their employees and to the minorities, may find it much easier to include in their human resources the highest qualified employees in the market.

The existence of a positive relation means that the advantages of the CSR practices outreach the costs of implementing it. Socially responsible firms may face less risk to suffer a value decrease or negative events. Also, according to the Network for business sustainability, CSR acts as a protector of the companies' reputation, enhancing their public image.

Bragdon and Marlin (1972), Parker and Eibert (1975) examined the influence of CSR on CFP, using accounting-based measures for the CFP, and they found a positive relationship. This result may not be reliable, as nor the reverse causality problem was dealt neither other control variables were taken into consideration.

Moskowitz (1972) concluded that CSR has a positive influence on CFP, supporting that socially responsible firms provide high social scores and therefore they attract more stable personnel, enhancing the productivity and the overall CFP.

Waddock and Graves (1997) constructed a CSR index by applying eight corporate social performance attributes, which are consistently updated by the firm Kinder, Lydenberg and Domini (KLD). By using CSR as a dependent variable and financial performance as independent and the other way around, and by applying size, risk and industry as control variables, they concluded to the existence of a positive relationship among these two variables.

Orlitzky et al. (2003), through a meta-analysis of 52 studies, found that there is a bidirectional relationship between CSR and CFP. Therefore, CSR has a positive influence on CFP and CFP has also a positive effect on CSR, implying the existence of reverse causality relationship.

Tsoutsoura M. (2004) examined the majority of S&P 500 firms from 1996 to 2000 and found that CSR practices are positively related with CFP.

Barnett and Salomon (2006) found also a positive relationship between the CSR and the CFP and they confirmed their hypothesis, that their relation has a U-shape. This U-shape is translated into two alternatives. The first one supports higher CFP for the firms that do low CSR and not moderate and the second one supports that firms adopting significant CSR practices manage the best possible CFP.

Chen and Wang (2011) examined the relation of the two variables in a sample of Chinese firms. They concluded that CSR positively influences CFP and specifically CSR practices have the potential to enhance the operating performance of the current year and attribute some positive effects on the performance of the next year.

Reverte (2012) investigated the relationship between CSR disclosure and the cost of equity capital in a sample of Spanish listed firms and found them to be negatively related. This means that the higher the CSR, the lower the cost of equity and therefore

the higher the firm value.

Dhaliwal et al. (2011) found the same results, supporting that significant CSR performance reduces the cost of equity capital, as the companies have not to deal with potential government regulations.

2.2 Possible explanations for the positive relationship between CSR – CFP

Especially in the case of the positive relationship, researchers have not yet discovered if this is attributed to the ability of the larger companies to secure sufficient resources for social activities and therefore realize some further financial benefits or if it is attributed to the effective management strategies related to the CSR aspects. The first alternative is considered as the slack resources theory, while the second as the good management theory.

However, to notice that there are many companies with poor resources or management, which have not the ability to invest largely in corporate social aspects or deal successfully with CSR practices and therefore enjoy less or not at all economic benefits.

2.2.1 Slack Resources Theory

The slack resources theory supports that firms which have secured an efficient financial performance entails to the possession of significant resources (slack resources). In other words, companies that are enough profitable provide large amounts of resources. Subsequently, they have the ability to invest a large proportion of these resources to social performance activities, such as for the environment, the community or the employee relations. The engagement in CSR activities is mainly attributed to the firm's financial affordability. This may result to a better social performance and subsequently to an even better financial performance. The basic idea is that a strong CFP result to the adoption of CSR. McGuire and colleagues (1988, 1990) have provided empirical evidence in support of slack resources theory.

2.2.2 Good Management Theory

The proponents of good management theory declare that good management policies are significantly correlated with CSR, as a sufficient corporate social performance is able to enhance the relationship with the key members of the company, contributing to the overall corporate performance (Freeman, 1984). Social interest towards good relations with the employees, especially for women and minorities, may result to higher productivity and to a friendlier environment work. Also, the success of good relations with the customers through the offer of high-quality products, the company's environmental sensitivity and the good relation with the government and the community have become competitive advantages. These decent reasons are able to

improve corporate productivity and profitability, due to sales growth or less management cost. Therefore, good management policies encourage the implementation of CSR, which may probably lead to better financial performance. In this theory the basic idea is that a strong CSR may result to better CFP. McGuire and colleagues (1988, 1990) have also empirically supported the good management theory.

2.3 Endogeneity Issue

Taking into consideration the above theories, it becomes obvious that between CSR and CFP might exist a reverse causality relationship. Especially, CSR may enhance CFP and the other way around, CFP may contribute to the social responsibility.

This is one more reason why the results regarding the relationship between CSR and CFP are inconclusive. There is difficulty to discover whether CSR results to better CFP or it is the opposite.

Tobin (1958) was the first to discover this endogeneity issue regarding the existence of the reverse causality. If this issue is not taken into consideration, it may lead to biased results, when researchers try to explain the relationship between CSR and CFP.

McGuire et al. (1990) observed that there is an interactive relation between CSR and CSP. In other words, he supported that better financial performance contributes to better CSR and vice versa. Waddock and Graves (1997) also supported that there is a virtuous cycle between CSR and CFP.

There are two theories explaining this relationship, the stakeholder theory and the slack resources theory. The stakeholder theory supports that good management policies result to a positive relation with key stakeholders. This implies the adoption of CSR, which can further lead to the enhancement of the CFP. On the other hand, the slack resources theory states that a sufficient CFP (available resources) provide the ability to engage in social matters and therefore improve CSR.

However, various methods are available, in order to correct this endogeneity issue. One easy and effective method is the application of lagged values for all the independent variables employed on the statistical analysis. The introduction of the time term is able to revoke the causality relationship. Another method is the application of instrumental variables, by employing independent variables in the regression model that affect CSR, but does not affect CFP. Hoje and Harjoto (2011) applied the method of instrumental variable, by employing company's age, as a variable that influence CSR, but not the CFP.

In this study the method of time lags will be used, in order to avoid reverse causality. Especially, in our regressions the lagged values(t-1) of the total CSR score, the strengths social score and the concerns social score, which are the independent

variables, will be employed.

2.4 Corporate Social Responsibility on Sin firms

CSR is a concept through which companies are able to contribute to the overall good of the community. In this research, the sample that is going to be employed, in order to examine the impact that CSR activities may apply on CFP can be thought as significantly controversial. The companies included in the sample are mainly related with the production and promotion of harmful products such as alcohol, tobacco, gambling, military and nuclear power products. They are called as sin firms, as their core activities deviate from the broad standards and they belong to the category of how firms should not operate. Alcohol, tobacco and gambling are known for their addictive and negative influence they apply on individuals and generally on the community. Technological products and software related with military have resulted in many fatal accidents and environmental damages due to misuse or irresponsible testing of the military equipment. Finally, nuclear power products are also related with the environmental destruction due to the waste disposal and the chemical emissions. These companies generally bear a negative reputation regarding their core products.

There are three alternative explanations of why sin-firms may adopt CSR practices. Firstly, they act socially responsibly in an effort of "window dressing", so they can conceal the questionable business image (window-dressing hypothesis). Secondly, managers employ CSR to enhance transparency and philanthropy and therefore to increase firm value (value-enhancement hypothesis). Lastly, firms adopt CSR without any specific intention, but due to social trends (value-irrelevance hypothesis).

Hong and Kacperczyk (2009) documented that sin firms are generally avoided by institutional investors due to the social standards and therefore they have to deal with higher costs of capital, higher risk and therefore higher returns. In addition to this finding, Chava (2014) and Lobe and Walkshäusl (2016) stated also that socially irresponsible firms are confronted with higher cost of capital.

The implementation of CSR from these firms is considered quite contradictory, as they try to enhance their social performance when they actually harm with their products the humans' health and the environment and they are related with disreputable activities.

Previous researches have proved that these firms do actively participate in CSR policies (Ahrens, 2004; Rundle-Thiele, Ball, & Gillespie, 2008).

There are proponents and opponents of CSR activities in sin-firms. The proponents support that every and each firm has the right to engage in CSR. On the other hand, opponents declare that there is an inherent contradiction between CSR and these firms, as their core products are harmful for the public health and the environment.

Sin firms were found to adopt CSR policies on a larger scale from their non-sin counterparts in an effort to balance moral perception and mitigate the negative screening of investors. Generally, firms follow CSR to reduce the negative publicity, a phenomenon called greenwashing (Vanhamme and Grobben, 2009).

Cai Y., Jo H. and Pan C. (2011) examined the relationship between CSR and firms' value in various sectors, for both sin and non-sin firms, for a large sample (475 firms), from 1995 to 2009, and found them to have a significant positive relationship. Especially, CSR of sin firms was argued to be positively related with Tobin's Q.

Sharma and Song (2017) examined 763 firms for a period of 25 years from 1990 to 2014 and found that sin firms have a positive and significant relationship with CSR, implying that sin firms participate more in CSR than their non-SIN counterparts.

Subsequently, it is clear that sin companies will adopt CSR as a core strategy and the majority of them will enjoy profitability increase.

Chapter 3

In the third chapter we will present the data employed in our research, the data sources, the methodology and the tools that were used, in order to carry out this study. Also, the results from the empirical research are going to be elaborated.

3.1 Data set

The sample of our research includes 87 companies, which are traded exclusively on the American Stock Exchange. The selected companies are characterized as controversial or "sin", as their core activities are engaged with harmful products. The sample was defined based on the KLD database selection of the sin firms. Especially, there are included tobacco, alcohol, gaming, military and nuclear power related firms. KLD database applies various properties and not only the criterion of production, in order to characterize one company as controversial.

For example, as alcohol companies are assumed not only these that their core activity is the alcohol production, but also these that allow their brand name to be on alcohol products, they produce raw materials necessary for the production of the alcoholic beverages or they operate as retailers by succeeding from this activity at least 15% of their total revenues. Furthermore, it is taken into consideration the criterion, if they are owned or they have an ownership percentage in a clear alcohol firm and if their revenues have generally any further engagement with alcoholic beverages. Therefore, any relation of a company's ownership structure and revenues with alcohol products may lead to be assumed as a sin firm.

The same criteria as well apply for the rest controversial industries, tobacco, gambling, military and nuclear power products, in order a firm to fall in the corresponding categories. There are 6 tobacco companies (6,9%), 46 military (52,9%), 8 alcohol (9,2%), 7 gambling (8%) and 20 nuclear power (23%) related corporations in our sample of the 87 controversial firms.

KLD is a leading database on the social research, providing environmental, social and governance (ESG) performance indicators for a large number of publicly held companies. It evaluates the social performance of the companies based on seven significant areas, which are distinguished in further sub-categories. It includes separately both positive(strengths) and negative(concerns) scores, the total score (strengths – concerns) for each category and the total score of all the seven categories. The data are collected yearly and it is applied a binary variable, 0 and 1, for each strength and concern respectively, for the sub-categories of every category.
The first category is community and it is related with charity giving activities. The second one is corporate governance, regarding with compensation programs and ownership structure. Diversity is another category specified on the establishment of minority groups. Employee relations is the fourth area related with the perks offered to the company's workforce. Environment is a key issue referred on friendly environmental activities, while human rights category is focused on the unprotected

human groups. Finally, product category is related with the quality, the innovation and the safety of them.

Subsequently, the selection of the controversial firms and the data regarding the CSR are retrieved from the KLD database. In our model, the total social score (strengths – concerns), the total score of the social strengths and the total score of the social concerns from six out of the seven categories will be used as the indicators for the CSR. Corporate governance will be excluded from the calculation of the CSR score, as it a practice that any company includes in its corporate strategies. Therefore, these three measures of the CSR will be the independent variables and in order to solve the issue of endogeneity we will use the lagged values of them in the statistical analysis.

The dependent variables will be Tobin's Q, Return on Equity (ROE) and Return on Assets (ROA), three significant value- and accounting-based measures of profitability. ROA is calculated by dividing the net income of a company by its total assets, while ROE is calculated by dividing the net income by the equity. Tobin's Q is calculated by dividing the companies' market value plus the short- and long-term debt by the total assets. We used Tobin's Q, ROE and ROA in this study because we assumed them as standard means of evaluating profitability on a relative basis. Also, they are more generally acceptable and less likely to produce misleading results than other measures.

Furthermore, in the empirical model a large variety of control variables will be employed. These variables are the following ones : corporate governance(CG) ,size, leverage(LEV), industry(IND), current ratio(CR), book-to market (BM)ratio, the ratio of earnings before interest and taxes to total assets(EBIT/TA), capital expenditure to total assets(CAPEX/TA), companies' age and the growth rate(GR). Also, there are included corresponding dummies to control for years (DumY) and industries (DumIND) fixed effects. These specific variables have been selected, as many previous researches have highlighted their significant influence on the relationship of CSR with CFP.

Corporate Governance is an essential part of every business, and previous studies have proved that it is positively related with CSR (Jo & Harjoto, 2011; Johnson & Greening ,1999; Khan et al., 2013) .CG is measured by the total score(strengths-concerns) attributed to it by the KLD database.

Furthermore, company size may determine the extent of CSR that firms are able to afford, as larger companies usually possess more resources than smaller companies do and therefore adopt CSR practices on a much greater scale. Also, larger firms attract much attention from the side of shareholders and they have significant influence on the community, rendering CSR a priority, in order to secure corporate legitimacy (Reverte, 2009). For the formulation of the variable size, firstly the annual sales of the companies were concentrated and then the logarithm of each observation was calculated.

The same thought goes with the financial leverage, as a company that has significant liabilities will consider these as priorities and place CSR practice lower in the list of the corporate responsibilities. Also, leverage is considered as a proxy for firm's risk level in

previous CSR studies (McWilliams and Siegel, 2001). The variable of leverage is calculated by the ratio of total debt to total capital. Total debt does include both short- and long-term debt, while total capital includes debt plus shareholders' equity.

The industry variable (IND) is established by concentrating the SIC (Standard Industrial Classification) code of every company. The current ratio (CR) is equal to the current assets divided by the current liabilities (Leventis & Weetman, 2004). The book-to-market ratio (BM) is calculated by dividing the equity on the balance sheet of each company by its market capitalization (number of shares outstanding multiplied with the share price). The importance of EBIT/TA ratio is highlighted by McWilliams and Siegel (2001), Hull and Rothenberg (2008) and Wagner (2010). As capital expenditure is defined any expense related with the acquisition, renovation and maintenance of operational physical assets. As growth rate (GR) is determined the yearly percentage change of the revenues. The company age is assumed to be significant, providing two different aspects. An aged company usually is more stable, well-organized and well-established in the market. On the other hand, new corporations may differentiate from the old ones, by introducing new and evolved services and promoting effectively their products and therefore obtain a significant proportion of the market.

The financial data regarding the dependent variables and the data for the control variables are collected from Thomson Database. Thomson Database is a useful and ease-to-use tool in examining publicly traded companies for their financial, market and other corporate related attributes.

To mention that the sample is restricted to only 87 firms, as there are included only these that provide all the necessary data both for the financial and the social performance for the entire 5-year period, from 2011 to 2015. There are no omitted values, resulting to 435 yearly observations on each variable.

3.2 Methodology & tools

Regarding the methodology, the impact of CSR practices on the CFP will be examined through regressions performance. All the regressions, summary statistics and the correlation matrix have been obtained from the Gretl software, which can be easily downloaded and it provides free access. It supports many types of data formats - in the specific study Excel file- and it is very easy to use.

In this research, nine Ordinary Least Square (OLS) regressions will be executed. In the first three regressions Tobin's Q, ROE and ROA will be assumed as dependent variables and the lagged values of CSR total score (TCSR) as independent. In the next three regressions, the dependent variables remain the same and the independent variable is replaced from the lagged values of the total social strengths score (STR). The remaining three regressions include the lagged values of the total score of concerns (CON) as independent variable.

The first set of regressions is:

1) Tobin's Q = $\alpha+\beta_1 TCSR+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA+$ $\beta_9 CAPEX/TA + \beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$
2) ROA = $\alpha+\beta_1 TCSR+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+ \beta_9 CAPEX/TA + \beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$
3) ROE = $\alpha+\beta_1 TCSR+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+ \beta_9 CAPEX/TA+ \beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$

The second set of regressions is:

1) Tobin's Q = $\alpha+\beta_1 STR+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+ \beta_9 CAPEX/TA+ \beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$
2) ROA = $\alpha+\beta_1 STR+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+ \beta_9 CAPEX/TA+\beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$
3) ROE=$\alpha+\beta_1 STR+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+\beta_9 CAPEX/TA+ \beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$

The third set of regressions is:

1) Tobin's Q = $\alpha+\beta_1 CON+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+ \beta_9 CAPEX/TA+ \beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$
2) ROA = $\alpha+\beta_1 CON+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+ \beta_9 CAPEX/TA+ \beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$
3) ROE=$\alpha+\beta_1 CON+\beta_2 CG+\beta_3 SIZE+\beta_4 LEV+\beta_5 IND+\beta_6 CR+\beta_7 BM+\beta_8 EBIT/TA$ $+\beta_9 CAPEX/TA+\beta_{10}$ AGE $+\beta_{11} GR+ \beta_{12\text{-}15} DumY +\beta_{16\text{-}19} DumIND$

3.3 Results Analysis

In this section some basic statistical characteristics regarding the sample and the results from the OLS regressions will be presented.

In table 1 are included the descriptive statistics of the variables that have been employed in this research. The sample includes data for 87 companies for a 5-year period, from 2011 to 2015. On each variable are matched 435 yearly observations. The table of descriptive statistics provides an overview of the mean, median, standard deviation, minimum and maximum of the observations.

Table 1. Descriptive Statistics

	Mean	**Median**	**S.D.**	**Min**	**Max**
Tobin' s Q	1.54	1.40	0.857	0.600	7.20
ROE	0.167	0.114	0.337	-1.21	5.28
ROA	0.0657	0.0575	0.0577	-0.187	0.495
STR	3.43	2.00	3.88	0.00	16.0
CON	1.66	1.00	1.74	0.00	11.0
TCSR	1.76	1.00	3.50	-5.00	16.0
CG	-0.0437	0.00	0.580	-2.00	2.00
SIZE	8.50	8.57	1.68	3.81	13.0
LEV	0.378	0.393	0.232	0.00	1.17
CR	2.06	1.70	1.50	0.200	12.6
BM	0.514	0.479	0.315	-0.651	1.96
EBIT/TA	0.0976	0.0783	0.112	-0.379	0.834
CAPEX/TA	0.0490	0.0354	0.0406	0.00275	0.262
AGE	64.3	47.0	45.4	0.00	176.
GR	0.0585	0.0427	0.149	-0.351	1.15

As can be observed from table 1 the mean of the total CSR score for the whole sample is 1.76, which is a positive value, indicating that on average the majority of the firms do successfully participate in the implementation of the CSR. This can be also confirmed from the positive mean that is matched on the strengths score. However, the positive mean of concerns score combined with the negative value of the CG implies that some CSR issues are not sufficiently dealt. The ROE and ROA ratios' median is 11,4% and 5,75%, respectively, which do not indicate extremely profitable companies. The Tobin's Q mean is higher than one, implying that on average the firms are overvalued and the investors are interested in buying these shares. Also, the size variable indicates that the firms are on average large companies and they are moderately engaged in debt activities (debt mean equal to 37,8%). The mean of the CR is higher than one, which means that companies have the ability to cover the current liabilities. The CAPEX/TA ratio indicates that 4.9% of the total assets is expended on capital expenditures. Finally, the average company age is 64.3 years indicating mature and well-established companies in the market.

Table 2. Correlation Matrix

	TobinsQ	ROE	ROA	STR	CON	TCSR	CG	SIZE	LEV	IND	CR	BM	EBIT / TA	CAPEX/ TA	AGE	GR
TobinsQ	1,000															
ROE	0,282	1,000														
ROA	0,673	0,476	1,000													
STR	-0,024	0,037	0,088	1,000												
CON	-0,026	0,010	0,098	0,428	1,000											
TCSR	-0,014	0,036	0,049	0,893	-0,025	1,000										
CG	-0,043	0,065	-0,065	-0,013	-0,125	0,048	1,000									
SIZE	-0,178	0,218	0,049	-0,032	-0,072	0,000	0,114	1,000								
LEV	-0,327	0,170	-0,321	0,027	-0,014	0,037	0,064	0,383	1,000							
IND	-0,135	-0,137	-0,208	-0,019	0,003	-0,022	-0,024	-0,052	-0,015	1,000						
CR	0,108	-0,113	0,024	-0,062	-0,035	-0,051	-0,040	-0,517	-0,511	-0,090	1,000					
BM	-0,620	-0,349	-0,414	0,007	0,024	-0,004	-0,018	-0,128	-0,119	0,098	0,154	1,000				
EBIT/ TA	0,677	0,295	0,727	0,187	0,034	0,190	-0,061	-0,106	-0,328	0,017	0,057	-0,378	1,000			
CAPEX/ TA	0,185	-0,058	0,112	-0,050	0,035	-0,073	-0,007	-0,145	-0,056	-0,095	-0,126	0,094	0,168	1,000		
AGE	-0,155	-0,041	-0,012	0,251	0,255	0,151	0,016	0,102	-0,014	0,039	0,102	0,040	-0,064	-0,060	1,000	
GR	0,217	0,045	0,283	0,004	0,086	-0,038	-0,150	-0,053	-0,111	0,016	-0,006	-0,098	0,161	0,078	-0,032	1,000

From the correlation matrix in table 2 can be observed that there is no significant relation among the selected variables. Some interrelated variables, such as the strengths social score with the total social score (0.893) and EBIT/TA with ROA (0.727) present correlation between them, but without being statistically significant.

As detailed above, the influence of the CSR on CFP will be examined by conducting several regressions. Especially, three financial performance measures will be used, Tobin's Q, ROE and ROA, in order to verify our results. Also, the lagged values of total CSR, strengths and concerns score will be employed in the regression models, so the problem of reverse causality to be avoided.

Table 3. Regression results of total CSR with Tobin's Q, ROE and ROA

	Tobin's Q	**ROE**	**ROA**
CONSTANT	2.62998***	-0.381262**	0.0516145***
TCSR	−0.0154420**	−0.00432760	−0.00117231**
CG	−0.0116256	0.0309565	0.000897367
SIZE	−0.0178190	0.0288673**	0.00544100***
LEV	−0.00704884***	0.00410029***	−0.000469736***
IND	−3.70697e-05**	−3.92752e-06	−6.81430e-06***
CR	0.0164758	0.00809788	−0.00197993
BM	−1.19902***	−0.185544***	−0.0234885***

EBIT/TA	3.09843***	0.929704***	0.319504***
CAPEX/TA	2.83844***	−0.363972	0.0118394
AGE	−0.00130765***	−0.000248317	7.81648e-05**
GR	0.434106***	0.0175535	0.0533739***
DumY	INCLUDED	INCLUDED	INCLUDED
DumIND	INCLUDED	INCLUDED	INCLUDED
ADJ. R^2	0.736473	0.243883	0.656890

The results in table 3 indicate that between CSR and CFP there is a negative relationship. The regression of the total CSR with Tobin's Q metric produced a negative coefficient, statistically significant at 5%. In the same regression it can be observed that the smaller the debt of a company, the higher the financial performance. The book-to-market ratio has also a statistically significant negative coefficient, showing that a low BM ratio (overvalued company) results to a high Tobin's Q. The EBIT/TA, CAPEX/TA and the growth rate are positively related with Tobin's Q at 1% significance level. Finally, the companies' age has a negative influence on the Tobin's Q, indicating that new firms probably manage higher profitability. The adjusted R-squared of the sample is 73.64%, proving that the independent variables sufficiently determine the dependent variable.

Moving on, the regression of the total CSR with the ROA establishes also a negative relationship, as in the regression of Tobin's Q, significant at 5%. In this model, the size variable is introducing itself as statistically significant at 1%, applying a substantial positive influence on the ROA. This positive coefficient indicates that the higher the company's size, the higher the ROA and the higher the influence that companies generally have on the community. The leverage and the book-to market ratios have as previously a statistically negative coefficient, as a company that has little debt and it is overvalued manage a better financial performance. Growth rate and EBIT/TA have a significant positive influence on ROA. Contrary to the previous regression, the companies' age variable is presented to have a positive coefficient, suggesting aged companies achieve higher profitability. The R-squared in this model is 67%, lower than the previous regression but the model is still sufficiently explained.

Table 4. Regression results of strengths score with Tobin's Q, ROE and ROA

	Tobin's Q	**ROE**	**ROA**
CONSTANT	2.65423***	−0.377897**	0.0514364***
STR	−0.0116794*	−0.00265948	−0.000525476
CG	−0.0125336	0.0305934	0.000764480
SIZE	−0.0197167	0.0286609**	0.00548850***
LEV	−0.00711177***	0.00407027***	−0.000481803***
IND	−3.71323e-05**	−3.80575e-06	−6.73705e-06***

CR	0.0157610	0.00818528	−0.00186484
BM	−1.20919***	−0.189155***	−0.0247078***
EBIT/TA	3.06514***	0.913467***	0.312911***
CAPEX/TA	2.86767***	−0.344944	0.0204369
AGE	−0.00123819**	−0.000243579	7.47694e-05*
GR	0.440334***	0.0193396	0.0538707***
DumY	INCLUDED	INCLUDED	INCLUDED
DumIND	INCLUDED	INCLUDED	INCLUDED
ADJ. R^2	0.735218	0.242852	0.653407

In the regression of the strengths score with Tobin's Q, presented on table 4, is also established a negative coefficient, statistically significant at 10%. This result supports that CSR adoption has a negative influence on CFP, as the higher the score of the social strengths the lower the profitability of a company. The debt ratio, the BM and the companies' age have also a significant negative coefficient, while EBIT/TA, CAPEX/TA and the growth rate have a statistically significant positive coefficient. The R-squared provides also a satisfactory percentage.

Table 5. Regression results of concerns score with Tobin's Q, ROE and ROA

	Tobin's Q	**ROE**	**ROA**
CONSTANT	2.56007***	−0.409745**	0.0410742**
CON	0.00984940	0.00579216	0.00253228**
CG	−0.0144477	0.0302131	0.000711057
SIZE	−0.0110386	0.0315319***	0.00640569***
LEV	−0.00735578***	0.00401171***	−0.000494542***
IND	−3.38962e-05**	−2.85814e-06	−6.46743e-06***
CR	0.0228186	0.0103622	−0.00121191
BM	−1.22013***	−0.190377***	−0.0244536***
EBIT/TA	2.92787***	0.880125***	0.305508***
CAPEX/TA	3.09768***	−0.284013	0.0358217
AGE	−0.00162039***	−0.000367330	3.59598e-05
GR	0.437296***	0.0172737	0.0529252***
DumY	INCLUDED	INCLUDED	INCLUDED
DumIND	INCLUDED	INCLUDED	INCLUDED
ADJ. R^2	0.733257	0.242821	0.657190

On the last set of the regressions presented on table 5 , the results of the concerns score regression with ROA propose one more time the existence of a negative relationship. The concerns score has obtained a positive coefficient statistically significant at 5%, which supports that when a company does not engage in CSR activities, the social concerns are increased and therefore the ROA moves upward. Also, the control variables such as the debt ratio, the size, the BM ratio and the others continue to apply, as in the previous regressions, statistically significant

influence on the financial performance measure.

Discussion

As can be observed, four of the nine regression models support an inverse impact of social responsibility on the financial performance. This means that companies with strong CSR face value or profitability decrease. The above results are contradictory to these that have been obtained from previous researches. There are studies that support CSR in controversial companies has a positive influence on the profitability of them (Cai, Jo and Pan, 2011; Sharma and Song, 2017). Sin firms were argued that on average participate on a larger scale in CSR practices than do other counterpart firms (Vanhamme and Grobben, 2009).

The sample companies are successfully involved in the CSR practices and this can be verified from the summary statistics presented above. However, the CSR adoption led to the establishment of an inverse relationship. This result is also in contrast with the stakeholder theory, which supports that CSR adoption has usually a positive influence on the CFP.

The negative relationship implies that CSR on controversial companies not only do not bring significant benefits, but instead it decreases their profitability. This negative relation supports that the adoption of CSR is related with some substantial extra costs, which are not being anticipated from higher profits. Waddock et al (2002) supported also with their study that between CSR and CFP exist a negative relationship, which leads to a competitive disadvantage. Lopez et al. (2007) established the same results, based on the fact that CSR is related with significant costs.

This negative relationship may be also triggered due to the fact that between CSR and CFP exist many intermediate variables, which cannot all be identified. The inclusion or the omission of various control variables may distort their real relationship. McWilliams, A. and Siegel, D. (2000) examined the relation of these two variables by including investments in R&D, as they supported that it is a variable that applies significant influence on the CFP. However, they concluded that there is a neutral relationship between CSR and CFP.

Furthermore, this negative relationship may be probably in favor of the window-dressing hypothesis, which supports that firms adopt CSR as a social trend, in order to enhance their reputation. Also, the managers of these companies maybe belong to the category of the immorals, who are not interested at all about the CSR.

On the other hand, the fact that these companies are engaged in disreputable corporate activities necessitate in a greater degree the implementation of CSR practices, as there is a substantial need to retain a decent public image. Sin

companies is likely to implement CSR in an effort to attract more investors, by improving the perception that they have for this kind of industries and by managing them to overcome the social bias related with such shares. Despite the fact that and as the regression models proved, the adoption of CSR did not manage to increase the companies' profitability.

The differentiation of this study is that the industry categories of the sample companies can be assumed as intrinsic, due to the nature of the products promoted. The revenues of these companies are substantially affected by the addiction of the people to these products, such as the alcohol, the tobacco and the gambling. The addictive influence of these products is the leading factor that drives the preference of consumers towards them. Thousands of campaigns and events have been held, advising and alerting people to give up or reduce the consumption of such products, as they are bad for their health, both the physical and the psychological. However, the future and the revenues of the sin companies have not been observed to suffer any significant damage, due to this "defamation". On the contrary, it is observed that the economy of these companies is thriving and they possess a significant place in the markets. The consumers are aware of the harmful effects of alcohol, tobacco and gambling, but they dismissed them, as they are not ready to give these habits up due to their addictive influence. The same applies and for the military and the nuclear power products, which are also responsible for harming people, as they are usually employed in cases of conflicts among various countries, for safety reasons and utilities provision. Military and nuclear power related companies try to establish themselves as essential for the global community and that's why they are increasing their presence on the markets. However, this cannot erase the negative effects of their operation.

All in all, the CSR practices were found that do not improve the financial performance, no matter their contribution to the society. The need and the addictive aspect of these products predominately determine the profitability of the corresponding companies. Subsequently, CSR is not essentially able to improve the CFP, as there are other reasons, such as the human adherence to sinful products that possess the leading role of the corporate sales. Sin companies invest funds on the CSR, contributing to the social concerns and improving their public image, but without applying any substantial influence on the consumption preference or the consumption "quantity". They might engage in CSR in a much greater degree than the other companies, probably in an effort to anticipate the fact that they succeed profits by "harming" their consumers. Also, CSR may facilitate the sin companies to face less litigation issues or reduce the litigation costs, as there are many organizations that may sue or accuse these firms for harming humans and the environment with their products.

Last but not least, the chosen control variables, such as the debt ratio, the size, the EBIT/TA, the book-to-market ratio and the CAPEX/TA, proved to be statistically significant in the majority of the regressions included. For example, companies with high debt obligations suffer a lower profitability, while large companies usually manage to have significant profits. This implies that these variables have the potential to apply a substantial influence on the corporate financial performance, and either enhance it or worsen it.

Conclusions

There is a significant controversy of whether the implementation of corporate social responsibility is related with the companies' financial performance. This debate has emerged a few decades ago and there is still no clear response. In this study, the relationship between CSR and CFP is examined in a decent sample of US companies, included in the tobacco, alcohol, gambling, military and nuclear power industries for the period from 2011 to 2015. The discrimination of this paper lies on the fact that the chosen companies are all engaged in controversial core activities and it is based on the most recently available CSR data.

The results of this study propose the existence of an inverse relationship between CSR and CFP. Especially, in the first set of regressions it is clear that the total CSR score, as the independent variable, has a statistically significant negative coefficient on the regressions with Tobin's Q and ROA. This indicates that the adoption of CSR has the ability to influence negatively the CFP. The negative relationship probably supports the window-dressing hypothesis, through which the corporations suffers some financial damages.

In the next set of regressions with the social strengths score as the independent variable it is also established a negative relationship between CSR and CFP. The statistically significant negative coefficient in the regression proposes that the higher the social strengths the lower the corporate value and profitability.

In the next set of regressions, the social concerns have a positive influence on the ROA, indicating that companies by neglecting their social responsibilities, succeed higher profits.

Taking into consideration the above, this study is in favor of the negative relationship between CSR and CFP. Therefore, CSR can be only detrimental for the financial performance of a sin company. This negative relation implies that the implementation of CSR is related with significant costs, which probably lead to profitability decrease. Also, CSR may not imply any significant influence on the financial performance, as the driving factor of the revenues in such companies is the addiction degree of the consumers to these products.

Contrary to the obtained results, my suggestion will be that controversial companies and generally every company should adopt CSR as a core strategy, not only due to its obligatory aspect but mainly due to its contribution to the social awareness.

CSR can be thought as a mean, through which companies have the potential to "repay" the customers' and the employees' loyalty, by contributing to the overall

good. The corporate environmental and social sensitivity is also able to enhance their public image. Subsequently, CSR may be actually proved beneficial, maybe not from a quantifiable aspect but definitely from a qualitative.

Finally, to mention that there are some limitations to this research, which may be probably addressed by future studies. Firstly, the companies' sample is very restricted due to the lack of available social data, retrieved from KLD. Also, the fact that KLD measures the social performance employing only a binary variable on some specific corporate activities may lead to biased ratings. Maybe the establishment of an indicator that measures the degree of the social responsibility and the benefits of it on community, and not only the participation or not on CSR, may lead to more objective and overall ratings. Furthermore, the companies engaged in the research are all traded in the American stock market. It would be very interesting the future studies to include sin companies from various countries, as each state provides its own ethical standards. The inclusion of a multinational sample may be able to establish more reliable and diversified results from the previous researches. Finally, the reverse causality that exist between CSR and CFP should be further investigated and should be addressed with more sufficient methods.

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Appendix

Table 1. Descriptive Statistics

	Mean	Median	S.D.	Min	Max
Tobin's Q	1.54	1.40	0.857	0.600	7.20
ROE	0.167	0.114	0.337	-1.21	5.28
ROA	0.0657	0.0575	0.0577	-0.187	0.495
STR	3.43	2.00	3.88	0.00	16.0
CON	1.66	1.00	1.74	0.00	11.0
TCSR	1.76	1.00	3.50	-5.00	16.0
CG	-0.0437	0.00	0.580	-2.00	2.00
SIZE	8.50	8.57	1.68	3.81	13.0
LEV	0.378	0.393	0.232	0.00	1.17
CR	2.06	1.70	1.50	0.200	12.6
BM	0.514	0.479	0.315	-0.651	1.96
EBIT/TA	0.0976	0.0783	0.112	-0.379	0.834
CAPEX/TA	0.0490	0.0354	0.0406	0.00275	0.262
AGE	64.3	47.0	45.4	0.00	176.
GR	0.0585	0.0427	0.149	-0.351	1.15

Table 2. Correlation Matrix

	TobinsQ	ROE	ROA	STR	CON	TCSR	CG	SIZE	LEV	IND	CR	BM	EBIT / TA	CAPEX/ TA	AGE	GR
TobinsQ	1,000															
ROE	0,282	1,000														
ROA	0,673	0,476	1,000													
STR	-0,024	0,037	0,088	1,000												
CON	-0,026	0,010	0,098	0,428	1,000											
TCSR	-0,014	0,036	0,049	0,893	-0,025	1,000										
CG	-0,043	0,065	-0,065	-0,013	-0,125	0,048	1,000									
SIZE	-0,178	0,218	0,049	-0,032	-0,072	0,000	0,114	1,000								
LEV	-0,327	0,170	-0,321	0,027	-0,014	0,037	0,064	0,383	1,000							
IND	-0,135	-0,137	-0,208	-0,019	0,003	-0,022	-0,024	-0,052	-0,015	1,000						
CR	0,108	-0,113	0,024	-0,062	-0,035	-0,051	-0,040	-0,517	-0,511	-0,090	1,000					
BM	-0,620	-0,349	-0,414	0,007	0,024	-0,004	-0,018	-0,128	-0,119	0,098	0,154	1,000				
EBIT/ TA	0,677	0,295	0,727	0,187	0,034	0,190	-0,061	-0,106	-0,328	0,017	0,057	-0,378	1,000			
CAPEX/ TA	0,185	-0,058	0,112	-0,050	0,035	-0,073	-0,007	-0,145	-0,056	-0,095	-0,126	0,094	0,168	1,000		
AGE	-0,155	-0,041	-0,012	0,251	0,255	0,151	0,016	0,102	-0,014	0,039	0,102	0,040	-0,064	-0,060	1,000	
GR	0,217	0,045	0,283	0,004	0,086	-0,038	-0,150	-0,053	-0,111	0,016	-0,006	-0,098	0,161	0,078	-0,032	1,000

Table 3. Regression results of total CSR with Tobin's Q, ROE and ROA

	Tobin's Q	**ROE**	**ROA**
CONSTANT	2.62998***	-0.381262**	0.0516145***
TCSR	−0.0154420**	−0.00432760	−0.00117231**
CG	−0.0116256	0.0309565	0.000897367
SIZE	−0.0178190	0.0288673**	0.00544100***
LEV	−0.00704884***	0.00410029***	−0.000469736***
IND	−3.70697e-05**	−3.92752e-06	−6.81430e-06***
CR	0.0164758	0.00809788	−0.00197993
BM	−1.19902***	−0.185544***	−0.0234885***
EBIT/TA	3.09843***	0.929704***	0.319504***
CAPEX/TA	2.83844***	−0.363972	0.0118394
AGE	−0.00130765***	−0.000248317	7.81648e-05**
GR	0.434106***	0.0175535	0.0533739***
DumY	INCLUDED	INCLUDED	INCLUDED
DumIND	INCLUDED	INCLUDED	INCLUDED
ADJ. R^2	0.736473	0.243883	0.656890

Table 4. Regression results of strengths score with Tobin's Q, ROE and ROA

	Tobin's Q	**ROE**	**ROA**
CONSTANT	2.65423***	−0.377897**	0.0514364***
STR	−0.0116794*	−0.00265948	−0.000525476
CG	−0.0125336	0.0305934	0.000764480
SIZE	−0.0197167	0.0286609**	0.00548850***
LEV	−0.00711177***	0.00407027***	−0.000481803***
IND	−3.71323e-05**	−3.80575e-06	−6.73705e-06***
CR	0.0157610	0.00818528	−0.00186484
BM	−1.20919***	−0.189155***	−0.0247078***
EBIT/TA	3.06514***	0.913467***	0.312911***
CAPEX/TA	2.86767***	−0.344944	0.0204369
AGE	−0.00123819**	−0.000243579	7.47694e-05*
GR	0.440334***	0.0193396	0.0538707***
DumY	INCLUDED	INCLUDED	INCLUDED
DumIND	INCLUDED	INCLUDED	INCLUDED
ADJ. R^2	0.735218	0.242852	0.653407

Table 5. Regression results of concerns score with Tobin's Q, ROE and ROA

	Tobin's Q	**ROE**	**ROA**
CONSTANT	2.56007***	−0.409745**	0.0410742**
CON	0.00984940	0.00579216	0.00253228**
CG	−0.0144477	0.0302131	0.000711057
SIZE	−0.0110386	0.0315319***	0.00640569***
LEV	−0.00735578***	0.00401171***	−0.000494542***
IND	−3.38962e-05**	−2.85814e-06	−6.46743e-06***
CR	0.0228186	0.0103622	−0.00121191
BM	−1.22013***	−0.190377***	−0.0244536***
EBIT/TA	2.92787***	0.880125***	0.305508***
CAPEX/TA	3.09768***	−0.284013	0.0358217
AGE	−0.00162039***	−0.000367330	3.59598e-05
GR	0.437296***	0.0172737	0.0529252***
DumY	INCLUDED	INCLUDED	INCLUDED
DumIND	INCLUDED	INCLUDED	INCLUDED
ADJ.	0.733257	0.242821	0.657190